

What is claimed is:

1. A method of chemical mechanical polishing a wafer, the method comprising:
 - forming an optical property modifying layer on a surface of a feature of interest disposed on a wafer;
 - removing material from the wafer using a chemical mechanical polishing process;
 - directing light onto a surface of the wafer and using light reflected from a surface of the wafer to determine when the optical property modifying layer has been reached; and
 - stopping the chemical mechanical polishing process in response to the determination that the optical property modifying layer has been reached.
2. The method of claim 1, wherein the optical property modifying layer comprises:
 - a layer of a material which is optically different from the material of the feature.
3. The method of claim 1, wherein the optical property modifying layer comprises:
 - an oxide of the material of the feature.
4. The method of claim 1, wherein the optical property modifying layer comprises:
 - a tarnish layer.
5. The method of claim 1, wherein the optical property modifying layer comprises:
 - a material that responds differentially to radiation of different wavelengths.
6. The method of claim 1, wherein the optical property modifying layer has a thickness ranging from 50 Å to 1 µm.
7. The method of claim 1, further comprising:
 - depositing a dielectric layer over the optical property modifying layer, wherein said dielectric layer comprises an oxide.

8. The method of claim 1, wherein the feature of interest comprises one of: Cu or NiFe.

9. The method of claim 8, wherein the feature of interest comprises NiFe and the optical property modifying layer comprises copper.

10. The method of claim 8, wherein the feature of interest comprises Cu and the optical property modifying layer comprises NiFe.

11. The method of claim 1, further comprising:
forming optical property modifying layers of different thicknesses and using the thicknesses to self-calibrate the process and improve endpoint accuracy.

12. The method of claim 1, wherein the optical modifying layer comprises a material selected from the group consisting of: CoNiFe, FeCo, and FeCo-alloys.

13. The method of claim 1, wherein the optical modifying layer is formed using a zincating or phosphating process.

14. The method of claim 1, further comprising:
using optical endpoint dummy structures on the wafer to improve signal/noise ratio of the optical signal.

15. A wafer for use in manufacturing a magnetic recording head, the wafer comprising:

a substrate;

a pattern including an optical property modifying layer on a surface of a feature of interest supported by the substrate; and

a dielectric layer positioned on the optical property modifying layer.

16. The wafer of claim 15, wherein the optical property modifying layer comprises:

a layer of a material which is optically different from the material of the feature.

17. The wafer of claim 15, wherein the optical property modifying layer comprises:

an oxide of the material of the feature.

18. The wafer of claim 15, wherein the optical property modifying layer comprises:

a tarnish layer.

19. The wafer of claim 15, wherein the optical property modifying layer comprises:

a material that responds differentially to radiation of different wavelengths.

20. The wafer of claim 15, wherein the optical property modifying layer has a thickness ranging from 50 Å to 1 µm.

21. The wafer of claim 15, further comprising:

depositing a dielectric layer over the optical property modifying layer, wherein said dielectric layer comprises an oxide.

22. The wafer of claim 15, wherein the feature of interest comprises one of: Cu or NiFe.

23. The wafer of claim 22, wherein the metal comprises NiFe and the optical property modifying layer comprises copper.

24. The wafer of claim 22, wherein the metal comprises Cu and the optical property modifying layer comprises NiFe.

25. The wafer of claim 15, wherein the optical modifying layer comprises a material selected from the group consisting of: CoNiFe, FeCo, and FeCo-alloys.

26. The wafer of claim 15, wherein the optical modifying layer is formed using a zincating or phosphating process.

27. The wafer of claim 15, further comprising:

optical endpoint dummy structures on the wafer.